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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

KANDA, et al.

Serial No. 09/971,773

Filed: October 9, 2001

For: ANTIBODY COMPOSITION-PRODUCING CELL



Atty. Ref.: 249-202

Group: Unassigned

Examiner: Unassigned

* * * * *

August 30, 2002

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

STATEMENT

The attached paper and computer readable copies of the Sequence Listing are the same. No new matter has been added.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____

A handwritten signature in dark ink, appearing to read "B. J. Sadoff", written over a horizontal line.

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Reg. No. 36,663

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SEQUENCE LISTING

<110> Yutaka KANDA
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Kazuhisa UCHIDA
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Naoko YAMANE
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 <212> DNA
 <213> *Cricetulus griseus*

<400> 6

actcatcttg gaatctcaga attggcgcta tgctactgga ggatgggaga ctgtgttttag 60
 acctgtaagt gagacatgca cagacaggtc tggcctctcc actggacact ggtcagggtga 120
 agtgaaggac aaaaatgttc aagtgggtcga gctccccatt gtagacagcc tccatcctcg 180
 tctccttac ttacccttgg ctgtaccaga agaccttgca gatcgactcc tgagagtcca 240
 tggtgatcct gcagtgtggt ggggtatccca gtttgtcaaa tacttgatcc gtccacaacc 300
 ttggctggaa agggaaatag aagaaaccac caagaagctt ggcttcaaac atccagttat 360
 tggagtccat gtcagacgca ctgacaaagt gggaacagaa gcagccttcc atcccattga 420
 ggaatacatg gtacacgttg aagaacattt tcagcttctc gaacgcagaa tgaaagtgga 480
 taaaaaaga gtgtatcttg cactgatga ccttcttttg ttaaaggagg caaagacaaa 540
 gtactccaat tatgaattta ttagtgataa ctctatttct tggtcagctg gactacacaa 600
 ccgatacaca gaaaattcac ttcggggcgt gatcctggat atacactttc tctcccaggc 660
 tgacttcctt gtgtgtactt tttcatccca ggtctgtagg gttgcttatg aaatcatgca 720
 aacactgcat cctgatgcct ctgcaaaact ccattcttta gatgacatct actatttttg 780
 aggccaaaat gcccacaacc agattgcagt ttatcctcac caacctcgaa ctaaagagga 840
 aatcccatg gaacctggag atatcattgg tgtggctgga aaccattgga atgggttactc 900
 taaagggtgtc aacagaaaac taggaaaaac aggccgtgtac ccttcttaca aagtccgaga 960
 gaagatagaa acggtcaag 979

<210> 7
 <211> 979
 <212> DNA
 <213> Rattus norvegicus

<400> 7
 actcatcttg gaatctcaga attggcgcta tgctactggt ggatgggaga ctgtgttttag 60
 acctgtaagt gagacatgca cagacagatc tggcctctcc actggacact ggtcagggtga 120
 agtgaatgac aaaaatattc aagtgggtgga gctccccatt gtagacagcc ttcatacctcg 180
 gcctccttac ttaccactgg ctgttccaga agaccttgca gatcgactcg taagagtcca 240
 tggtgatcct gcagtgtggt ggggtgtccca gttcgtcaaa tatttgattc gtccacaacc 300
 ttggctagaa aaggaaatag aagaagccac caagaagctt ggcttcaaac atccagtcac 360
 tggagtccat gtcagacgca cagacaaagt gggaacagag gcagccttcc atcccatcga 420
 agagtacatg gtacatgttg aagaacattt tcagcttctc gcacgcagaa tgcaagtgga 480

taaaaaaaga gtatatctgg ctaccgatga ccctgctttg ttaaaggagg caaagacaaa 540
 gtactccaat tatgaattta ttagtgataa ctctatttct tggtcagctg gactacacaa 600
 tcggtacaca gaaaattcac ttcggggcgt gatcctggat atacactttc tctctcaggc 660
 tgacttccta gtgtgtactt tttcatccca ggtctgtcgg gttgcttatg aaatcatgca 720
 aacctgcat cctgatgcct ctgcaaactt ccactcttta gatgacatct actatatttg 780
 aggccaaaat gccacaaacc agattgccgt ttatcctcac aaacctcgaa ctgatgagga 840
 aattccaatg gaacctggag atatcattgg tgtggctgga aaccattggg atggttattc 900
 taaaggtgtc aacagaaaac ttggaaaaac aggcttatat ccctcctaca aagtccgaga 960
 gaagatagaa acggtcaag 979

<210> 8
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 8
 aagtataagc ttacatggat gacgatatcg ctgcgctcgt 40

<210> 9
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 9
 atttaactgc aggaagcatt tgcggtggac gatggagggg 40

<210> 10
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 10
 atttaaggta ccgaagcatt tgcggtgcac gatggagggg 40

<210> 11
 <211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 11

ctccaattat gaatttatta gtg

23

<210> 12

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 12

ggatgtttga agccaagctt cttgg

25

<210> 13

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 13

gtccatggtg atcctgcagt gtgg

24

<210> 14

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 14

caccaatgat atctccaggt tcc

23

<210> 15

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 15

gatatcgctg cgctcgttgt cgac

24

<210> 16
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 16
caggaaggaa ggctggaaaa gagc 24

<210> 17
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 17
gatatcgctg cgctcgctgt cgac 24

<210> 18
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 18
caggaaggaa ggctggaaga gagc 24

<210> 19
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 19
atgcgggcat ggactgggtc ctgg 24

<210> 20
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 20
ctattttttca gcttcaggat atgtggg

27

<210> 21
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 21
gtctgaagca ttatgtgttg aagc

24

<210> 22
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 22
gtgagtacat tcattgtact gtg

23

<210> 23
<211> 575
<212> PRT
<213> Cricetulus griseus

<400> 23
Met Arg Ala Trp Thr Gly Ser Trp Arg Trp Ile Met Leu Ile Leu Phe
1 5 10 15
Ala Trp Gly Thr Leu Leu Phe Tyr Ile Gly Gly His Leu Val Arg Asp
20 25 30
Asn Asp His Pro Asp His Ser Ser Arg Glu Leu Ser Lys Ile Leu Ala
35 40 45
Lys Leu Glu Arg Leu Lys Gln Gln Asn Glu Asp Leu Arg Arg Met Ala
50 55 60
Glu Ser Leu Arg Ile Pro Glu Gly Pro Ile Asp Gln Gly Thr Ala Thr
65 70 75 80
Gly Arg Val Arg Val Leu Glu Glu Gln Leu Val Lys Ala Lys Glu Gln
85 90 95
Ile Glu Asn Tyr Lys Lys Gln Ala Arg Asn Asp Leu Gly Lys Asp His
100 105 110
Glu Ile Leu Arg Arg Arg Ile Glu Asn Gly Ala Lys Glu Leu Trp Phe
115 120 125

Phe Leu Gln Ser Glu Leu Lys Lys Leu Lys Lys Leu Glu Gly Asn Glu
130 135 140
Leu Gln Arg His Ala Asp Glu Ile Leu Leu Asp Leu Gly His His Glu
145 150 155 160
Arg Ser Ile Met Thr Asp Leu Tyr Tyr Leu Ser Gln Thr Asp Gly Ala
165 170 175
Gly Glu Trp Arg Glu Lys Glu Ala Lys Asp Leu Thr Glu Leu Val Gln
180 185 190
Arg Arg Ile Thr Tyr Leu Gln Asn Pro Lys Asp Cys Ser Lys Ala Arg
195 200 205
Lys Leu Val Cys Asn Ile Asn Lys Gly Cys Gly Tyr Gly Cys Gln Leu
210 215 220
His His Val Val Tyr Cys Phe Met Ile Ala Tyr Gly Thr Gln Arg Thr
225 230 235 240
Leu Ile Leu Glu Ser Gln Asn Trp Arg Tyr Ala Thr Gly Gly Trp Glu
245 250 255
Thr Val Phe Arg Pro Val Ser Glu Thr Cys Thr Asp Arg Ser Gly Leu
260 265 270
Ser Thr Gly His Trp Ser Gly Glu Val Lys Asp Lys Asn Val Gln Val
275 280 285
Val Glu Leu Pro Ile Val Asp Ser Leu His Pro Arg Pro Pro Tyr Leu
290 295 300
Pro Leu Ala Val Pro Glu Asp Leu Ala Asp Arg Leu Leu Arg Val His
305 310 315 320
Gly Asp Pro Ala Val Trp Trp Val Ser Gln Phe Val Lys Tyr Leu Ile
325 330 335
Arg Pro Gln Pro Trp Leu Glu Arg Glu Ile Glu Glu Thr Thr Lys Lys
340 345 350
Leu Gly Phe Lys His Pro Val Ile Gly Val His Val Arg Arg Thr Asp
355 360 365
Lys Val Gly Thr Glu Ala Ala Phe His Pro Ile Glu Glu Tyr Met Val
370 375 380
His Val Glu Glu His Phe Gln Leu Leu Glu Arg Arg Met Lys Val Asp
385 390 395 400
Lys Lys Arg Val Tyr Leu Ala Thr Asp Asp Pro Ser Leu Leu Lys Glu
405 410 415
Ala Lys Thr Lys Tyr Ser Asn Tyr Glu Phe Ile Ser Asp Asn Ser Ile
420 425 430

Ser Trp Ser Ala Gly Leu His Asn Arg Tyr Thr Glu Asn Ser Leu Arg
435 440 445

Gly Val Ile Leu Asp Ile His Phe Leu Ser Gln Ala Asp Phe Leu Val
450 455 460

Cys Thr Phe Ser Ser Gln Val Cys Arg Val Ala Tyr Glu Ile Met Gln
465 470 475 480

Thr Leu His Pro Asp Ala Ser Ala Asn Phe His Ser Leu Asp Asp Ile
485 490 495

Tyr Tyr Phe Gly Gly Gln Asn Ala His Asn Gln Ile Ala Val Tyr Pro
500 505 510

His Gln Pro Arg Thr Lys Glu Glu Ile Pro Met Glu Pro Gly Asp Ile
515 520 525

Ile Gly Val Ala Gly Asn His Trp Asn Gly Tyr Ser Lys Gly Val Asn
530 535 540

Arg Lys Leu Gly Lys Thr Gly Leu Tyr Pro Ser Tyr Lys Val Arg Glu
545 550 555 560

Lys Ile Glu Thr Val Lys Tyr Pro Thr Tyr Pro Glu Ala Glu Lys
565 570 575

<210> 24

<211> 575

<212> PRT

<213> Mus musculus

<400> 24

Met Arg Ala Trp Thr Gly Ser Trp Arg Trp Ile Met Leu Ile Leu Phe
1 5 10 15

Ala Trp Gly Thr Leu Leu Phe Tyr Ile Gly Gly His Leu Val Arg Asp
20 25 30

Asn Asp His Pro Asp His Ser Ser Arg Glu Leu Ser Lys Ile Leu Ala
35 40 45

Lys Leu Glu Arg Leu Lys Gln Gln Asn Glu Asp Leu Arg Arg Met Ala
50 55 60

Glu Ser Leu Arg Ile Pro Glu Gly Pro Ile Asp Gln Gly Thr Ala Thr
65 70 75 80

Gly Arg Val Arg Val Leu Glu Glu Gln Leu Val Lys Ala Lys Glu Gln
85 90 95

Ile Glu Asn Tyr Lys Lys Gln Ala Arg Asn Gly Leu Gly Lys Asp His
100 105 110

Glu Ile Leu Arg Arg Arg Ile Glu Asn Gly Ala Lys Glu Leu Trp Phe
 115 120 125
 Phe Leu Gln Ser Glu Leu Lys Lys Leu Lys His Leu Glu Gly Asn Glu
 130 135 140
 Leu Gln Arg His Ala Asp Glu Ile Leu Leu Asp Leu Gly His His Glu
 145 150 155 160
 Arg Ser Ile Met Thr Asp Leu Tyr Tyr Leu Ser Gln Thr Asp Gly Ala
 165 170 175
 Gly Asp Trp Arg Glu Lys Glu Ala Lys Asp Leu Thr Glu Leu Val Gln
 180 185 190
 Arg Arg Ile Thr Tyr Leu Gln Asn Pro Lys Asp Cys Ser Lys Ala Arg
 195 200 205
 Lys Leu Val Cys Asn Ile Asn Lys Gly Cys Gly Tyr Gly Cys Gln Leu
 210 215 220
 His His Val Val Tyr Cys Phe Met Ile Ala Tyr Gly Thr Gln Arg Thr
 225 230 235 240
 Leu Ile Leu Glu Ser Gln Asn Trp Arg Tyr Ala Thr Gly Gly Trp Glu
 245 250 255
 Thr Val Phe Arg Pro Val Ser Glu Thr Cys Thr Asp Arg Ser Gly Leu
 260 265 270
 Ser Thr Gly His Trp Ser Gly Glu Val Asn Asp Lys Asn Ile Gln Val
 275 280 285
 Val Glu Leu Pro Ile Val Asp Ser Leu His Pro Arg Pro Pro Tyr Leu
 290 295 300
 Pro Leu Ala Val Pro Glu Asp Leu Ala Asp Arg Leu Leu Arg Val His
 305 310 315 320
 Gly Asp Pro Ala Val Trp Trp Val Ser Gln Phe Val Lys Tyr Leu Ile
 325 330 335
 Arg Pro Gln Pro Trp Leu Glu Lys Glu Ile Glu Glu Ala Thr Lys Lys
 340 345 350
 Leu Gly Phe Lys His Pro Val Ile Gly Val His Val Arg Arg Thr Asp
 355 360 365
 Lys Val Gly Thr Glu Ala Ala Phe His Pro Ile Glu Glu Tyr Met Val
 370 375 380
 His Val Glu Glu His Phe Gln Leu Leu Ala Arg Arg Met Gln Val Asp
 385 390 395 400
 Lys Lys Arg Val Tyr Leu Ala Thr Asp Asp Pro Thr Leu Leu Lys Glu
 405 410 415

Ala Lys Thr Lys Tyr Ser Asn Tyr Glu Phe Ile Ser Asp Asn Ser Ile
420 425 430

Ser Trp Ser Ala Gly Leu His Asn Arg Tyr Thr Glu Asn Ser Leu Arg
435 440 445

Gly Val Ile Leu Asp Ile His Phe Leu Ser Gln Ala Asp Phe Leu Val
450 455 460

Cys Thr Phe Ser Ser Gln Val Cys Arg Val Ala Tyr Glu Ile Met Gln
465 470 475 480

Thr Leu His Pro Asp Ala Ser Ala Asn Phe His Ser Leu Asp Asp Ile
485 490 495

Tyr Tyr Phe Gly Gly Gln Asn Ala His Asn Gln Ile Ala Val Tyr Pro
500 505 510

His Lys Pro Arg Thr Glu Glu Glu Ile Pro Met Glu Pro Gly Asp Ile
515 520 525

Ile Gly Val Ala Gly Asn His Trp Asp Gly Tyr Ser Lys Gly Ile Asn
530 535 540

Arg Lys Leu Gly Lys Thr Gly Leu Tyr Pro Ser Tyr Lys Val Arg Glu
545 550 555 560

Lys Ile Glu Thr Val Lys Tyr Pro Thr Tyr Pro Glu Ala Glu Lys
565 570 575

<210> 25
<211> 18
<212> PRT
<213> Homo sapiens

<400> 25
Asp Glu Ser Ile Tyr Ser Asn Tyr Tyr Leu Tyr Glu Ser Ile Pro Lys
1 5 10 15

Pro Cys

<210> 26
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequense: Synthetic DNA

<400> 26
cttgtgtgac tcttaactct cagag

25

<210> 27
<211> 23

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic DNA

 <400> 27
 ccctcgagat aacttcgtat agc 23

 <210> 28
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic DNA

 <400> 28
 ggtaggcctc actaactg 18

 <210> 29
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic DNA

 <400> 29
 catagaaaca agtaacaaca gccag 25

 <210> 30
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic DNA

 <400> 30
 gagacttcag cccacttcaa ttattggc 28

 <210> 31
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic DNA

 <400> 31
 gaggccactt gtgtagcgcc aagtg 25

<210> 32
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 32
aggaaggtgg cgctcatcac gggc 24

<210> 33
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 33
taaggccaca agtccttaatt gcatcc 26

<210> 34
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 34
caggggtggt cccttgagga ggtggaa 27

<210> 35
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 35
cccctcacgc atgaagcctg gag 23

<210> 36
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 36
ggcaggagac caccttgca gtgccac 28

<210> 37
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 37
ggcgctggct taccggaga ggaatggg 28

<210> 38
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 38
aaaaggcctc agttagtga ctgtatgg 28

<210> 39
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 39
cgcgatcct caagcgttg ggttggtcc 29

<210> 40
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 40
cccaagcttg ccaccatggc tcacgtccc gctagctgcc cgagc 45

<210> 41
<211> 31
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 41

ccggaattct gccaaagtatg agccatcctg g

31

<210> 42

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 42

gccatccaga aggtggt

17

<210> 43

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 43

gtcttgtcag ggaagat

17

<210> 44

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 44

ggcaggagac caccttgcca gtgcccac

28

<210> 45

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 45

gggtgggctg taccttctgg aacagggc

28

<210> 46

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 46

ggcgctggct taccgagaga ggaatggg

28

<210> 47

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 47

ggaatgggtg tttgtctcct ccaaagatgc

30

<210> 48

<211> 1316

<212> DNA

<213> *Cricetulus griseus*

<400> 48

gccccgcccc ctccacctgg accgagagta gctggagaat tgtgcaccgg aagtagctct 60
tggactggtg gaaccttgcg caggtgcagc aacaatgggt gagccccagg gatccaggag 120
gacctaagt acagggggct ctggactggt gggcagagct atccagaagg tggtcgcaga 180
tggcgctggc ttaccggag aggaatgggt gtttgtctcc tccaaagatg cagatctgac 240
ggatgcagca caaacccaag cctgttcca gaaggtacag cccacccatg tcatccatct 300
tgctgcaatg gtaggaggcc ttttcggaa tatcaaatac aacttggatt tctggaggaa 360
gaatgtgcac atcaatgaca acgtcctgca ctacgctttc gaggtgggca ctgcgaaggt 420
gggtctcctgc ctgtccacct gtatcttccc tgacaagacc acctatccta ttgatgaaac 480
aatgatccac aatgggtccac cccacagcag caattttggg tactcgtatg ccaagaggat 540
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tacagggaaa ccacggaggc agttcatcta ctactggac ctagcccggc tcttcatctg 780
ggctcctgcy gagtacaatg aagttgagcc catcatcctc tcagtgggcy aggaagatga 840
agtctccatt aaggaggcag ctgaggctgt agtggaggcc atggacttct gtggggaagt 900

cacttttgat tcaacaaagt cagatgggca gtataagaag acagccagca atggcaagct 960
tcgggcctac ttgcctgatt tccgtttcac acccttcaag caggctgtga aggagacctg 1020
tgcttggttc accgacaact atgagcaggc ccggaagtga agcatgggac aagcgggtgc 1080
tcagctggca atgcccagtc agtaggctgc agtctcatca tttgcttgtc aagaactgag 1140
gacagtatcc agcaacctga gccacatgct ggtctctctg ccaggggggt tcatgcagcc 1200
atccagtagg gcccatgttt gtccatcctc gggggaaggc cagaccaaca ccttgtttgt 1260
ctgcttctgc cccaacctca gtgcattcat gctggctctg ctgtcccttg tctaga 1316

<210> 49

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 49

gatcctgctg ggacaaaaat tgg 23

<210> 50

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 50

cttaacatcc caagggatgc tg 22

<210> 51

<211> 1965

<212> DNA

<213> *Cricetulus griseus*

<400> 51

acgggggggt cccggaagcg gggaccatgg cgtctctgcg cgaagcgagc ctgcggaagc 60
tgcggcgctt ttccgagatg agaggcaaac ctgtggcaac tgggaaattc tgggatgtag 120
ttgtaataac agcagctgac gaaaagcagg agcttgctta caagcaacag ttgtcggaga 180
agctgaagag aaaggaattg ccccttgag ttaactacca tgttttcact gatcctctg 240
gaacaaaaat tggaaatgga ggatcaacac tttgttctct tcagtgcctg gaaagcctct 300
atggagacaa gtggaattcc ttcacagtcc tgttaattca ctctggtggc tacagtcaac 360

gacttcccaa tgcaagcgct ttaggaaaaa tcttcacggc tttaccactt ggtgagccca 420
tttatcagat gttggactta aaactagcca tgtacatgga tttccctca cgcatagaagc 480
ctggagtttt ggtcacctgt gcagatgata ttgaactata cagcattggg gactctgagt 540
ccattgcatt tgagcagcct ggctttactg ccctagccca tccatctagt ctggctgtag 600
gcaccacaca tggagtatth gtattggact ctgccggttc tttgcaacat ggtgacctag 660
agtacaggca atgccaccgt ttctccata agcccagcat tgaaaacatg caccacttta 720
atgccgtgca tagactagga agctttggtc aacaggactt gagtgggggt gacaccacct 780
gtcatccatt gcactctgag tatgtctaca cagatagcct attttacatg gatcataaat 840
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cctatgggtga ctttctgcag gcactgggac ctggagcaac tgcagagtac accaagaaca 960
cctcacacgt cactaaagag gaatcacact tgttgacat gaggcagaaa atattccacc 1020
tcctcaaggg aacacccctg aatgttggtg tccttaataa ctccaggttt tatcacattg 1080
gaacaacgga ggagtatctg ctacatttca cttccaatgg ttcggttacag gcagagctgg 1140
gcttgcaatc catagctttc agtgtctttc caaatgtgcc tgaagactcc catgagaaac 1200
cctgtgtcat tcacagcatc ctgaattcag gatgctgtgt ggcccctggc tcagtggtag 1260
aatattccag attaggacct gaggtgtcca tctcgaaaaa ctgcattatc agcggttctg 1320
tcatagaaaa agctgttctg ccccatggtt ctttctgtg ctctttaagt gtggagataa 1380
atggacactt agaattattca actatggtgt ttggcatgga agacaacttg aagaacagtg 1440
ttaaaaccat atcagatata aagatgcttc agttctttgg agtctgtttc ctgacttggt 1500
tagatatthg gaaccttaaa gctatggaag aactattttc aggaagtaag acgcagctga 1560
gcctgtggac tgctogaatt ttccctgtct gttcttctct gagtgagtcg gttgcagcat 1620
cccttgggat gttaaatagcc attcgaaacc attcgccatt cagcctgagc aacttcaagc 1680
tgctgtccat ccaggaaatg cttctctgca aagatgtagg agacatgctt gcttacaggg 1740
agcaactctt tctagaaatc agttcaaaga gaaaacagtc tgattcggag aaatcttaaa 1800
tacaatggat tttgcctgga aacaggattg caaatgcagg catattctat agatctctgg 1860
gttcttcttt ctttctcccc tctctcttt ctttccctt tgatgtaatg acaaaggtaa 1920
aatggccac ttctgatgga aaaaaaaaaa aaaaaaaaaa aaaaa 1965

<211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic DNA

 <400> 52
 caggggtggt cccttgagga ggtggaa 27

 <210> 53
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic DNA

 <400> 53
 cactgagcca ggggccacac agcatcc 27

 <210> 54
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic DNA

 <400> 54
 cccctcacgc atgaagcctg gag 23

 <210> 55
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic DNA

 <400> 55
 tgccaccggt tcctccataa gccacgc 27

 <210> 56
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic DNA

 <400> 56
 atggctcaag ctcccgctaa gtgcccga 28

<210> 57
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 57
tcaagcgttt gggttggtcc tcatgag 27

<210> 58
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 58
tccggggatg gcgagatggg caagc 25

<210> 59
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 59
cttgacatgg ctctgggctc caag 24

<210> 60
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 60
ccacttcagt cggtcggtag tatatt 25

<210> 61
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 61
 cgctcaccgc cctgaggcga catg 24

<210> 62
 <211> 32
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 62
 ggcaggtgct gtcggtgagg tcaccatagt gc 32

<210> 63
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 63
 gggggccatgc caaggactat gtcg 24

<210> 64
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 64
 atgtggctga tggtacaaaa tgatg 25

<210> 65
 <211> 1504
 <212> DNA
 <213> Cricetulus griseus

<220>
 <221> CDS
 <222> (1)..(1119)

<400> 65
 atg gct cac gct ccc gct agc tgc ccg agc tcc agg aac tct ggg gac 48
 Met Ala His Ala Pro Ala Ser Cys Pro Ser Ser Arg Asn Ser Gly Asp
 1 5 10 15

ggc gat aag ggc aag ccc agg aag gtg gcg ctc atc acg ggc atc acc 96
 Gly Asp Lys Gly Lys Pro Arg Lys Val Ala Leu Ile Thr Gly Ile Thr

20						25						30						
ggc	cag	gat	ggc	tca	tac	ttg	gca	gaa	ttc	ctg	ctg	gag	aaa	gga	tac	144		
Gly	Gln	Asp	Gly	Ser	Tyr	Leu	Ala	Glu	Phe	Leu	Leu	Glu	Lys	Gly	Tyr			
35						40						45						
gag	gtt	cat	gga	att	gta	cgg	cga	tcc	agt	tca	ttt	aat	aca	ggt	cga	192		
Glu	Val	His	Gly	Ile	Val	Arg	Arg	Ser	Ser	Ser	Phe	Asn	Thr	Gly	Arg			
50						55						60						
att	gaa	cat	tta	tat	aag	aat	cca	cag	gct	cat	att	gaa	gga	aac	atg	240		
Ile	Glu	His	Leu	Tyr	Lys	Asn	Pro	Gln	Ala	His	Ile	Glu	Gly	Asn	Met			
65						70						75			80			
aag	ttg	cac	tat	ggt	gac	ctc	acc	gac	agc	acc	tgc	cta	gta	aaa	atc	288		
Lys	Leu	His	Tyr	Gly	Asp	Leu	Thr	Asp	Ser	Thr	Cys	Leu	Val	Lys	Ile			
			85						90						95			
atc	aat	gaa	gtc	aaa	cct	aca	gag	atc	tac	aat	ctt	ggt	gcc	cag	agc	336		
Ile	Asn	Glu	Val	Lys	Pro	Thr	Glu	Ile	Tyr	Asn	Leu	Gly	Ala	Gln	Ser			
			100						105						110			
cat	gtc	aag	att	tcc	ttt	gac	tta	gca	gag	tac	act	gca	gat	gtt	gat	384		
His	Val	Lys	Ile	Ser	Phe	Asp	Leu	Ala	Glu	Tyr	Thr	Ala	Asp	Val	Asp			
115						120						125						
gga	gtt	ggc	acc	ttg	cgg	ctt	ctg	gat	gca	att	aag	act	tgt	ggc	ctt	432		
Gly	Val	Gly	Thr	Leu	Arg	Leu	Leu	Asp	Ala	Ile	Lys	Thr	Cys	Gly	Leu			
130						135						140						
ata	aat	tct	gtg	aag	ttc	tac	cag	gcc	tca	act	agt	gaa	ctg	tat	gga	480		
Ile	Asn	Ser	Val	Lys	Phe	Tyr	Gln	Ala	Ser	Thr	Ser	Glu	Leu	Tyr	Gly			
145			150						155						160			
aaa	gtg	caa	gaa	ata	ccc	cag	aaa	gag	acc	acc	cct	ttc	tat	cca	agg	528		
Lys	Val	Gln	Glu	Ile	Pro	Gln	Lys	Glu	Thr	Thr	Pro	Phe	Tyr	Pro	Arg			
			165						170						175			
tcg	ccc	tat	gga	gca	gcc	aaa	ctt	tat	gcc	tat	tgg	att	gta	gtg	aac	576		
Ser	Pro	Tyr	Gly	Ala	Ala	Lys	Leu	Tyr	Ala	Tyr	Trp	Ile	Val	Val	Asn			
			180						185						190			
ttt	cga	gag	gct	tat	aat	ctc	ttt	gcg	gtg	aac	ggc	att	ctc	ttc	aat	624		
Phe	Arg	Glu	Ala	Tyr	Asn	Leu	Phe	Ala	Val	Asn	Gly	Ile	Leu	Phe	Asn			
195						200						205						
cat	gag	agt	cct	aga	aga	gga	gct	aat	ttt	gtt	act	cga	aaa	att	agc	672		
His	Glu	Ser	Pro	Arg	Arg	Gly	Ala	Asn	Phe	Val	Thr	Arg	Lys	Ile	Ser			
210						215						220						
cgg	tca	gta	gct	aag	att	tac	ctt	gga	caa	ctg	gaa	tgt	ttc	agt	ttg	720		
Arg	Ser	Val	Ala	Lys	Ile	Tyr	Leu	Gly	Gln	Leu	Glu	Cys	Phe	Ser	Leu			
225			230						235						240			
gga	aat	ctg	gac	gcc	aaa	cga	gac	tgg	ggc	cat	gcc	aag	gac	tat	gtc	768		
Gly	Asn	Leu	Asp	Ala	Lys	Arg	Asp	Trp	Gly	His	Ala	Lys	Asp	Tyr	Val			
			245						250						255			

gag gct atg tgg ctg atg tta caa aat gat gaa cca gag gac ttt gtc	816
Glu Ala Met Trp Leu Met Leu Gln Asn Asp Glu Pro Glu Asp Phe Val	
260 265 270	
ata gct act ggg gaa gtt cat agt gtc cgt gaa ttt gtt gag aaa tca	864
Ile Ala Thr Gly Glu Val His Ser Val Arg Glu Phe Val Glu Lys Ser	
275 280 285	
ttc atg cac att gga aag acc att gtg tgg gaa gga aag aat gaa aat	912
Phe Met His Ile Gly Lys Thr Ile Val Trp Glu Gly Lys Asn Glu Asn	
290 295 300	
gaa gtg ggc aga tgt aaa gag acc ggc aaa att cat gtg act gtg gat	960
Glu Val Gly Arg Cys Lys Glu Thr Gly Lys Ile His Val Thr Val Asp	
305 310 315 320	
ctg aaa tac tac cga cca act gaa gtg gac ttc ctg cag gga gac tgc	1008
Leu Lys Tyr Tyr Arg Pro Thr Glu Val Asp Phe Leu Gln Gly Asp Cys	
325 330 335	
tcc aag gcg cag cag aaa ctg aac tgg aag ccc cgc gtt gcc ttt gac	1056
Ser Lys Ala Gln Gln Lys Leu Asn Trp Lys Pro Arg Val Ala Phe Asp	
340 345 350	
gag ctg gtg agg gag atg gtg caa gcc gat gtg gag ctc atg aga acc	1104
Glu Leu Val Arg Glu Met Val Gln Ala Asp Val Glu Leu Met Arg Thr	
355 360 365	
aac ccc aac gcc tga gcacctctac aaaaaaattc gcgagacatg gactatggtg	1159
Asn Pro Asn Ala	
370	
cagagccagc caaccagagt ccagccactc ctgagaccat cgaccataaa ccctcgactg	1219
cctgtgtcgt cccacagct aagagctggg ccacagggtt gtgggcacca ggacggggac	1279
actccagagc taaggccact tcgcttttgt caaaggctcc tctcaatgat tttgggaaat	1339
caagaagttt aaaatcacat actcatttta cttgaaatta tgtcactaga caacttaa	1399
ttttgagtct tgagattgtt tttctctttt cttattaaat gatctttcta tgaccagca	1459
aaaaaaaaaa aaaaaaggga tataaaaaaa aaaaaaaaaa aaaaa	1504

<210> 66

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 66

atgaagttgc actatggtga cctca

25

<210> 67

<211> 59

<212> DNA

<213> Cricetulus griseus

<400> 67
ccgacagcac ctgcctagta aaaatcatca atgaagtcaa acctacagag atctacaat 59

<210> 68
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 68
gacttagcag agtacactgc agatg 25

<210> 69
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 69
accttgata gaaaggggtg gtctc 25

<210> 70
<211> 125
<212> DNA
<213> Cricetulus griseus

<400> 70
ttgatggagt tggcaccttg cggcttcttg atgcaattaa gacttggtggc cttataaatt 60
ctgtgaagtt ctaccaggcc tcaactagtg aactgtatgg aaaagtgcaa gaaataccccc 120
agaaa 125

<210> 71
<211> 372
<212> PRT
<213> Cricetulus griseus

<400> 71
Met Ala His Ala Pro Ala Ser Cys Pro Ser Ser Arg Asn Ser Gly Asp
1 5 10 15
Gly Asp Lys Gly Lys Pro Arg Lys Val Ala Leu Ile Thr Gly Ile Thr
20 25 30
Gly Gln Asp Gly Ser Tyr Leu Ala Glu Phe Leu Leu Glu Lys Gly Tyr
35 40 45
Glu Val His Gly Ile Val Arg Arg Ser Ser Ser Phe Asn Thr Gly Arg
50 55 60

Ile Glu His Leu Tyr Lys Asn Pro Gln Ala His Ile Glu Gly Asn Met
 65 70 75 80

Lys Leu His Tyr Gly Asp Leu Thr Asp Ser Thr Cys Leu Val Lys Ile
 85 90 95

Ile Asn Glu Val Lys Pro Thr Glu Ile Tyr Asn Leu Gly Ala Gln Ser
 100 105 110

His Val Lys Ile Ser Phe Asp Leu Ala Glu Tyr Thr Ala Asp Val Asp
 115 120 125

Gly Val Gly Thr Leu Arg Leu Leu Asp Ala Ile Lys Thr Cys Gly Leu
 130 135 140

Ile Asn Ser Val Lys Phe Tyr Gln Ala Ser Thr Ser Glu Leu Tyr Gly
 145 150 155 160

Lys Val Gln Glu Ile Pro Gln Lys Glu Thr Thr Pro Phe Tyr Pro Arg
 165 170 175

Ser Pro Tyr Gly Ala Ala Lys Leu Tyr Ala Tyr Trp Ile Val Val Asn
 180 185 190

Phe Arg Glu Ala Tyr Asn Leu Phe Ala Val Asn Gly Ile Leu Phe Asn
 195 200 205

His Glu Ser Pro Arg Arg Gly Ala Asn Phe Val Thr Arg Lys Ile Ser
 210 215 220

Arg Ser Val Ala Lys Ile Tyr Leu Gly Gln Leu Glu Cys Phe Ser Leu
 225 230 235 240

Gly Asn Leu Asp Ala Lys Arg Asp Trp Gly His Ala Lys Asp Tyr Val
 245 250 255

Glu Ala Met Trp Leu Met Leu Gln Asn Asp Glu Pro Glu Asp Phe Val
 260 265 270

Ile Ala Thr Gly Glu Val His Ser Val Arg Glu Phe Val Glu Lys Ser
 275 280 285

Phe Met His Ile Gly Lys Thr Ile Val Trp Glu Gly Lys Asn Glu Asn
 290 295 300

Glu Val Gly Arg Cys Lys Glu Thr Gly Lys Ile His Val Thr Val Asp
 305 310 315 320

Leu Lys Tyr Tyr Arg Pro Thr Glu Val Asp Phe Leu Gln Gly Asp Cys
 325 330 335

Ser Lys Ala Gln Gln Lys Leu Asn Trp Lys Pro Arg Val Ala Phe Asp
 340 345 350

Glu Leu Val Arg Glu Met Val Gln Ala Asp Val Glu Leu Met Arg Thr
 355 360 365

Asn Pro Asn Ala
370

<210> 72
<211> 321
<212> PRT
<213> Cricetulus griseus

<400> 72

Met Gly Glu Pro Gln Gly Ser Arg Arg Ile Leu Val Thr Gly Gly Ser
1 5 10 15

Gly Leu Val Gly Arg Ala Ile Gln Lys Val Val Ala Asp Gly Ala Gly
20 25 30

Leu Pro Gly Glu Glu Trp Val Phe Val Ser Ser Lys Asp Ala Asp Leu
35 40 45

Thr Asp Ala Ala Gln Thr Gln Ala Leu Phe Gln Lys Val Gln Pro Thr
50 55 60

His Val Ile His Leu Ala Ala Met Val Gly Gly Leu Phe Arg Asn Ile
65 70 75 80

Lys Tyr Asn Leu Asp Phe Trp Arg Lys Asn Val His Ile Asn Asp Asn
85 90 95

Val Leu His Ser Ala Phe Glu Val Gly Thr Arg Lys Val Val Ser Cys
100 105 110

Leu Ser Thr Cys Ile Phe Pro Asp Lys Thr Thr Tyr Pro Ile Asp Glu
115 120 125

Thr Met Ile His Asn Gly Pro Pro His Ser Ser Asn Phe Gly Tyr Ser
130 135 140

Tyr Ala Lys Arg Met Ile Asp Val Gln Asn Arg Ala Tyr Phe Gln Gln
145 150 155 160

His Gly Cys Thr Phe Thr Ala Val Ile Pro Thr Asn Val Phe Gly Pro
165 170 175

His Asp Asn Phe Asn Ile Glu Asp Gly His Val Leu Pro Gly Leu Ile
180 185 190

His Lys Val His Leu Ala Lys Ser Asn Gly Ser Ala Leu Thr Val Trp
195 200 205

Gly Thr Gly Lys Pro Arg Arg Gln Phe Ile Tyr Ser Leu Asp Leu Ala
210 215 220

Arg Leu Phe Ile Trp Val Leu Arg Glu Tyr Asn Glu Val Glu Pro Ile
225 230 235 240

Ile Leu Ser Val Gly Glu Glu Asp Glu Val Ser Ile Lys Glu Ala Ala

	245		250		255
Glu Ala Val Val Glu Ala Met Asp Phe Cys Gly Glu Val Thr Phe Asp					
	260		265		270
Ser Thr Lys Ser Asp Gly Gln Tyr Lys Lys Thr Ala Ser Asn Gly Lys					
	275		280		285
Leu Arg Ala Tyr Leu Pro Asp Phe Arg Phe Thr Pro Phe Lys Gln Ala					
	290		295		300
Val Lys Glu Thr Cys Ala Trp Phe Thr Asp Asn Tyr Glu Gln Ala Arg					
305		310		315	320

Lys

<210> 73
 <211> 590
 <212> PRT
 <213> Cricetulus griseus

<400> 73
Met Ala Ser Leu Arg Glu Ala Ser Leu Arg Lys Leu Arg Arg Phe Ser
1 5 10 15
Glu Met Arg Gly Lys Pro Val Ala Thr Gly Lys Phe Trp Asp Val Val
20 25 30
Val Ile Thr Ala Ala Asp Glu Lys Gln Glu Leu Ala Tyr Lys Gln Gln
35 40 45
Leu Ser Glu Lys Leu Lys Arg Lys Glu Leu Pro Leu Gly Val Asn Tyr
50 55 60
His Val Phe Thr Asp Pro Pro Gly Thr Lys Ile Gly Asn Gly Gly Ser
65 70 75 80
Thr Leu Cys Ser Leu Gln Cys Leu Glu Ser Leu Tyr Gly Asp Lys Trp
85 90 95
Asn Ser Phe Thr Val Leu Leu Ile His Ser Gly Gly Tyr Ser Gln Arg
100 105 110
Leu Pro Asn Ala Ser Ala Leu Gly Lys Ile Phe Thr Ala Leu Pro Leu
115 120 125
Gly Glu Pro Ile Tyr Gln Met Leu Asp Leu Lys Leu Ala Met Tyr Met
130 135 140
Asp Phe Pro Ser Arg Met Lys Pro Gly Val Leu Val Thr Cys Ala Asp
145 150 155 160
Asp Ile Glu Leu Tyr Ser Ile Gly Asp Ser Glu Ser Ile Ala Phe Glu
165 170 175
Gln Pro Gly Phe Thr Ala Leu Ala His Pro Ser Ser Leu Ala Val Gly

180						185						190					
Thr	Thr	His	Gly	Val	Phe	Val	Leu	Asp	Ser	Ala	Gly	Ser	Leu	Gln	His		
		195					200					205					
Gly	Asp	Leu	Glu	Tyr	Arg	Gln	Cys	His	Arg	Phe	Leu	His	Lys	Pro	Ser		
		210				215					220						
Ile	Glu	Asn	Met	His	His	Phe	Asn	Ala	Val	His	Arg	Leu	Gly	Ser	Phe		
225					230					235						240	
Gly	Gln	Gln	Asp	Leu	Ser	Gly	Gly	Asp	Thr	Thr	Cys	His	Pro	Leu	His		
				245					250								
Ser	Glu	Tyr	Val	Tyr	Thr	Asp	Ser	Leu	Phe	Tyr	Met	Asp	His	Lys	Ser		
			260					265					270				
Ala	Lys	Lys	Leu	Leu	Asp	Phe	Tyr	Glu	Ser	Val	Gly	Pro	Leu	Asn	Cys		
		275					280					285					
Glu	Ile	Asp	Ala	Tyr	Gly	Asp	Phe	Leu	Gln	Ala	Leu	Gly	Pro	Gly	Ala		
		290					295					300					
Thr	Ala	Glu	Tyr	Thr	Lys	Asn	Thr	Ser	His	Val	Thr	Lys	Glu	Glu	Ser		
305					310					315						320	
His	Leu	Leu	Asp	Met	Arg	Gln	Lys	Ile	Phe	His	Leu	Leu	Lys	Gly	Thr		
				325					330							335	
Pro	Leu	Asn	Val	Val	Val	Leu	Asn	Asn	Ser	Arg	Phe	Tyr	His	Ile	Gly		
			340					345					350				
Thr	Thr	Glu	Glu	Tyr	Leu	Leu	His	Phe	Thr	Ser	Asn	Gly	Ser	Leu	Gln		
		355					360					365					
Ala	Glu	Leu	Gly	Leu	Gln	Ser	Ile	Ala	Phe	Ser	Val	Phe	Pro	Asn	Val		
		370					375					380					
Pro	Glu	Asp	Ser	His	Glu	Lys	Pro	Cys	Val	Ile	His	Ser	Ile	Leu	Asn		
385					390					395						400	
Ser	Gly	Cys	Cys	Val	Ala	Pro	Gly	Ser	Val	Val	Glu	Tyr	Ser	Arg	Leu		
				405					410					415			
Gly	Pro	Glu	Val	Ser	Ile	Ser	Glu	Asn	Cys	Ile	Ile	Ser	Gly	Ser	Val		
			420					425					430				
Ile	Glu	Lys	Ala	Val	Leu	Pro	Pro	Cys	Ser	Phe	Val	Cys	Ser	Leu	Ser		
		435					440					445					
Val	Glu	Ile	Asn	Gly	His	Leu	Glu	Tyr	Ser	Thr	Met	Val	Phe	Gly	Met		
		450					455					460					
Glu	Asp	Asn	Leu	Lys	Asn	Ser	Val	Lys	Thr	Ile	Ser	Asp	Ile	Lys	Met		
465					470					475						480	
Leu	Gln	Phe	Phe	Gly	Val	Cys	Phe	Leu	Thr	Cys	Leu	Asp	Ile	Trp	Asn		

				485				490				495			
Leu	Lys	Ala	Met	Glu	Glu	Leu	Phe	Ser	Gly	Ser	Lys	Thr	Gln	Leu	Ser
500				505				510							
Leu	Trp	Thr	Ala	Arg	Ile	Phe	Pro	Val	Cys	Ser	Ser	Leu	Ser	Glu	Ser
515				520				525							
Val	Ala	Ala	Ser	Leu	Gly	Met	Leu	Asn	Ala	Ile	Arg	Asn	His	Ser	Pro
530				535				540							
Phe	Ser	Leu	Ser	Asn	Phe	Lys	Leu	Leu	Ser	Ile	Gln	Glu	Met	Leu	Leu
545				550				555				560			
Cys	Lys	Asp	Val	Gly	Asp	Met	Leu	Ala	Tyr	Arg	Glu	Gln	Leu	Phe	Leu
				565				570				575			
Glu	Ile	Ser	Ser	Lys	Arg	Lys	Gln	Ser	Asp	Ser	Glu	Lys	Ser		
580				585				590							